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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,401	04/15/2004	Tommy Kristensen Bysted	939-011770-US (PAR)	8165
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PERMAN & GREEN 425 POST ROAD FAIRFIELD, CT 06824			EXAMINER JACKSON, BLANE J	
			ART UNIT	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/825,401

Applicant(s)

BYSTED ET AL.

Examiner

Blane J. Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-12, 14-20 is/are rejected.
- 7) ☒ Claim(s) 6 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 October 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

Claims 21-28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 16 July 2007.

### *Drawings*

Figures 1-3, 8, 9, 12 and 14 are objected to because they lack complete legends to easily identify the block functions without reference to the Specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the

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applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claim 9 is objected to since it claims dependency to claim 7 where claim 8 is expected and treated as such in the following rejection to be consistent with independent claim 8 and the subsequent dependent claims. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 7, 9, 10 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Hsu et al. (US 2005/0143116).

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As to claims 1 and 8, Hsu teaches a communication device and method of generating a received signal quality signal in a communication system, the method comprising:

Receiving a signal from a physical channel (figure 1, paragraphs 0027-0029),

Extracting a transport channel format combination indicator from the received signal (paragraphs 0030 and 0035-0036, format for the downlink DPCH in W0CDMA includes data fields, a transmit power control field (322), a pilot field (326) and a transport format combination indicator (TFCI) field (324)),

Processing one or more transport channel signals, contained in the received signal in accordance with the extracted transport channel format combination indicator, said processing including at least channel decoding (figure 4, paragraph 0044-0047, physical channel carries N transport channels, each transport channel associated with a respective BLER target processed by RX data processor (442) with decoding in the outer loop of the power control mechanism (400)).

Generating a received signal quality signal in dependence on the quality of the or each transport channel signal prior to channel decoding (figure 4, paragraphs 0038-0041 and 0138, the inner loop (410) of the power control mechanism (400) attempts to maintain the received signal quality (SIR) for the downlink transmission as measured at the terminal based on the dedicated Pilot field (326)).

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As to claims 2 and 9 with respect to claims 1 and 8, Hsu teaches wherein the or each transport channel signal comprises a sequence of data blocks (figure 3, paragraph 0036, W-CDMA).

As to claims 3 and 10 with respect to claims 2 and 9, Hsu teaches the quality of the or each transport channel signal is represented by a block bit error rate determined prior to channel decoding (paragraphs 0042-0045, each transport channel may be associated with a respective BLER or other Quality of Service target(s)).

As to claim 7 and 14 with respect to claims 1 and 8, Hsu teaches the step of transmitting the received signal quality signal in a control channel (paragraphs 0039-0040, TPC command is generated for each slot in a W-CDMA system and sent on the uplink).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 5, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al. (US 2005/0143116) in view of Jonsson (US 2005/0143112).

As to claims 4 and 5 with respect to claim 3 and claims 11 and 12 with respect to claim 11, Hsu teaches the method according to claim 3 but does not teach the determined bit error rate of a transport channel signal is averaged over the same period comprising a plurality of data blocks.

Jonsson teaches power control in a radio communication system comprising an inner and outer loop to determine the transmit power command (TPC) transmitted to the base station such that the block error rate at a receiver is held constant at a given target value, figure 4, paragraph 0025. Jonsson further teaches the outer loop comprises a BLER estimator (410) uses a moving average to get the estimated BLER value from the CRC error flag, paragraphs 0026 and 0027.

Since Jonsson, like Hsu, teaches a closed power control loop suitable for Third Generation Partnership Project solution for a WCDMA system, paragraphs 0002-0005, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the closed loop power control system of Hsu in accordance with the signal quality averaging of Jonsson to support the higher demand for a correct and fast power control system.

Claims 15, 17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al. (US 2005/0143116) in view of Kim et al. (US 7,027,828).

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As to claims 15 and 18, Hsu teaches a communication device and method of generating a received signal quality signal in a communication system comprising:

Receiving a signal from a physical channel, the signal comprising one or more transport channels (figure 1, paragraphs 0027-0029, a CDMA or GSM system where W-CDMA data is transmitted to a terminal to be processed as one or more transport channels),

Extracting a *Pilot field* from the received signal and determining the *signal quality (SIR)* therefore (paragraph 0035-0039, figures 3 and 4, a power control mechanism including an inner loop and outer loop),

Generating a received signal quality signal in dependence on the *associated BLER target of the extracted pilot field* (paragraphs 0039,0044-0046 and 0138).

Hsu teaches a downlink DPCH that includes data fields, a transmit power control field, a pilot field and a transport format combination indicator field where the pilot field is extracted from the received signal to measure the signal quality (S/N, pilot strength, received signal strength) for downlink power control to meet the associated BLER or other quality target, paragraphs 0039-0042 and 0138, but does not teach generating a received signal quality signal in dependence on the extracted transport channel format combination indicator.

Kim teaches downlink power adjustment to the DPCCH and DPDCH to a mobile station in the conventional sense and different power controls are adapted for the transport format combination indicator (TFCI) field for the DSCH that is effective in the handover of 3GPP systems, column 8, line 8 to column 9, line 50. Kim teaches the



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mobile station measures the SIR using a pilot signal of the DPCCH to generate a TPC message for the DCH and also measures the power of the TFCI2 to generate a TPC message to the DSCH, column 9, line 53 to column 10, line 64.

Since Kim teaches measurement of the pilot field and TFCI, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Hsu to alternatively measure the TFCI field since the TFCI field is continuously transmitted and better support soft handover in a 3GPP system.

As to claims 17 and 20, Hsu teaches transmitting the received signal quality signal in a control channel (paragraphs 0039-0040, TPC command is generated for each slot in a W-CDMA system and sent on the uplink).

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu et al. (US 2005/0143116) and Kim et al. (US 7,027,828) in view of Jonsson (US 2005/0143112).

As to claim 19, Hsu modified teaches the device of claim 18 but does not teach the determined bit error rate of a transport channel signal is averaged over the same period comprising a plurality of data blocks.

Jonsson teaches power control in a radio communication system comprising an inner and outer loop to determine the transmit power command (TPC) transmitted to the base station such that the block error rate at a receiver is held constant at a given target value, figures 2-4, paragraph 0025. Jonsson further teaches the outer loop comprises a

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BLER estimator (410) uses a moving average to get the estimated BLER value from the CRC error flag, paragraphs 0026 and 0027.

Since Jonsson, like Hsu, teaches a closed power control loop suitable for Third Generation Partnership Project solution for a WCDMA system, paragraphs 0002-0005, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the closed loop power control system of Hsu modified in accordance with the signal quality averaging of Jonsson to support the higher demand for a correct and fast power control system.

### ***Allowable Subject Matter***

Claims 6 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art made of record does not teach the average bit error rate across the transport channel signals is weighted in dependence on the transport formats used for the transport signals.

### ***Conclusion***

The prior art made of record and not relied upon but considered pertinent to applicant's disclosure includes Oh et al. (US 2004/0137860), Freiberg et al. (US 2002/0115443) and Kim et al. (US 7,266,384).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blane J. Jackson whose telephone number is (571) 272-7890. The examiner can normally be reached on Monday through Thursday, 7:30 AM-6:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read "Blane J. Jackson". The signature is written in a cursive, flowing style.